

IN THE CLAIMS:

14. (Currently Pending) A stably transfected rodent cell line which has been engineered to express a heterologous protein, said cell line comprising a host cell transformed or transfected with a heterologous nucleic acid molecule comprising a sequence of nucleotides or ribonucleotides that inducibly express an α_7 subunit of a human neuronal nicotinic acetylcholine receptor, wherein said α_7 subunit comprises a sequence of nucleotides selected from the group consisting of :

EA₁ (a) a sequence of nucleotides as ^{set} forth in SEQ ID No: 11 which encode a human α_7 subunit.

(b) a sequence of nucleotides that encode a polypeptide as set forth in SEQ ID No: 12;

(c) a sequence of nucleotides degenerate with the human α_7 subunit polypeptide encoding sequence of (a) or (b).

EA₂ 15. (Currently Pending) The stable transfected cell line according to claim 14, wherein the cell line is derived from rat pituitary tumor tissue.

16. (Currently Pending) The stably transfected cell line as claimed in claim 14 wherein the rodent cell line is a mouse GH₄C₁ cell line.

17. 2 (Currently Pending) The cell line according to claim 14 wherein the heterologous protein is a functional human neuronal nicotinic acetylcholine receptor.

18. 3 (Currently Pending) The cell line according to claim 14, further comprising a marker gene, wherein expression of the marker gene indicates expression of the heterologous protein.

19. 4 (Currently Pending) The cell line according to claim 14, wherein the heterologous nucleic acid molecule is contained within an expression vector.

20. 5

(Currently Pending) The stable transfected cell line according to claim 14, wherein the polypeptide of SEQ ID NO: 12 is the only heterologous acetylcholine receptor subunit expressed by the cell.

21. 6

(Currently Pending) A recombinant host cell comprising a heterologous nicotinic acetylcholine receptor that comprises a subunit encoded by a heterologous nucleic acid molecule comprising a sequence of nucleotides or ribonucleotides as set forth in SEQ ID No: 11.

22. 7

(Currently Pending) A recombinant host cell comprising a heterologous nicotinic acetylcholine receptor that comprises a subunit encoded by a heterologous nucleic acid molecule wherein said nucleic acid molecule encodes a polypeptide comprising the sequence of amino acids as set forth in SEQ ID No: 12.

23. 8

(Currently Pending) The host cell according to claim 22, wherein the polypeptide of SEQ ID NO: 12 is the only heterologous acetylcholine receptor subunit expressed by the cell.